

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A method of promoting regeneration of surface cartilage of a joint, comprising:

covering an area of damaged cartilage of a joint to be treated with a patch consisting essentially of a multi layer sheet of collagen membrane material, wherein said multi layer sheet of collagen membrane material is comprised of at least one barrier layer which acts as a barrier to inhibit passage of cells therethrough, wherein said at least one barrier layer has a thickness of about 0.2-2mm and has a structure consisting essentially of collagen I, collagen III or mixtures thereof, wherein said sheet of collagen membrane material further comprises a matrix layer having a thickness of about 0.2-12mm and having a matrix structure which consists essentially of collagen II having an open sponge like texture; wherein said barrier layer has at least one smooth face so as to inhibit cell adhesion thereon, said barrier layer further having a fibrous face opposite said smooth face, wherein said matrix layer is adhered to said fibrous face;

fixing the patch over said area with the at least one said barrier layer oriented away from the damaged area, and said matrix layer with a matrix structure consisting essentially of collagen II oriented toward the damaged area wherein said patch is fixed over the damaged area without application of a separate hemostatic barrier layer in said area; and

allowing said area to regenerate cartilage.

2. (Previously Presented) The method of claim 1, wherein said barrier layer, said matrix layer or both, are impregnated with glycosaminoglycan.

3. (Previously Presented) The method of claim 2, wherein the glycosaminoglycan is hyaluronic acid, chondroitin 6 sulphate, keratin sulphate or dermatan sulphate.
4. (Previously Presented) The method of claim 1 wherein the patch is fixed over the area to be treated by adhesively bonding the patch to cartilage surrounding said area to be treated.
5. (Previously Presented) The method of claim 1 wherein the patch is fixed over the area to be treated by suturing the patch to cartilage surrounding said area to be treated.
6. (Previously Presented) The method of claim 1 wherein said membrane material carries at least one pharmaceutically or biologically active substance or mesenchymal stem cells having ability to differentiate into cells to regenerate cartilage or bone.
7. (Previously Presented) The method of claim 6 in which the pharmaceutically active substance is selected from the group consisting Taurolidine, Taurultam and a mixture thereof.
8. (Previously Presented) The method of claim 6 in which the pharmaceutically active substance is selected from the group consisting of cell growth promoting hormones, bone morphogenetic proteins (BMPs), other skeletal matrix molecules, and signaling peptides.
9. (Currently amended) The method of claim 6 wherein the pharmaceutically active substance is selected from the group consisting of BMP-2, BMP-3, BMP-4, BMP-7, BMP-8, OP-1, PTH, TGF- β , TGF- β 1, VEGF, CIP, IGF, PTHrP, PDGF and mixtures thereof.
10. (Previously Presented) The method of claim 1 wherein said membrane material carries articular cartilage stem cells or bone stem cells.

11. (Previously Presented) The method of claim 1 wherein said membrane material carries bone marrow stromal cells.

12. (Canceled)

13. (Previously Presented) The method of claim 1 further comprising implanting a resorbable bone mineral implant material into a region of bone injury in the area to be treated, prior to fixing said patch over said area to be treated.

14. (Previously Presented) The method of claim 13, wherein said bone mineral is charged with chondrocytes.

15. (Previously Presented) The method of claim 1, wherein said patch is charged with chondrocytes.

16. (Previously Presented) The method of claim 1 wherein said patch is comprised of a single barrier layer.

17. (Previously Presented) The method of claim 1 wherein said patch comprises said matrix layer sandwiched between one said barrier layer and a second said barrier layer.

18. (Previously Presented) The method of claim 1 wherein the matrix layer is provided by collagen II material derived from natural cartilage.

19. (Previously Presented) The method of claim 18 wherein the collagen II material is derived from hyaline cartilage from pigs.

20. (Previously Presented) The method of claim 18 wherein the collagen II material is physically cross linked.

21. (Canceled)

22. (Previously Presented) The method of claim 1 wherein said at least one barrier layer is derived from peritoneum membrane from calves or pigs.

23. (Canceled)

24. (Canceled)